

**ABSTRACT OF THE DISCLOSURE**

A method of embedding data in material comprises the steps of:  
embedding data in original material to produce data embedded material;  
removing the watermark from the data embedded material to produce  
5 recovered material;  
comparing the original and recovered material to determine the differences and  
locations of differences therebetween; and  
storing the said locations and corrections which correct the said differences.  
A method of removing the data embedded in the material, comprises the steps  
10 of:  
removing the data from the material to produce recovered material;  
deriving the said corrections and locations from the said store; and  
using the corrections to correct the recovered material at the said locations.  
A method of embedding data in material, preferably comprises the steps of:  
15 producing transform coefficients  $C_i$  representing a spatial frequency transform  
of the material, and  
combining the coefficients  $C_i$  with the data bits  $R_i$  to produce a modified  
coefficient  $C_i'$  where  
$$C_i' = C_i + \alpha_i R_i$$
  
20 the method further comprising determining  $\alpha_i$  for each unmodified coefficient  
 $C_i$  as a function  $F\{C_n\}_i$  of a predetermined set  $\{C_n\}_i$  of transform coefficients  $C_n$   
which set excludes the coefficient  $C_i$ .

[Figures 3A, B and 4]